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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,985	07/26/2005	Tetsuji Zama	3103-110	1325
66458 7590 12/09/2009 WATCHSTONE P+D, PLLC 1250 CONNECTICUT AVENUE, N.W. SUITE 700 WASHINGTON, DC 20036-2657				
EXAMINER THOMAS, JAISON P				
ART UNIT		PAPER NUMBER		
1796				
NOTIFICATION DATE		DELIVERY MODE		
12/09/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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# Office Action Summary

## Application No.

10/523,985

## Applicant(s)

ZAMA ET AL.

## Examiner

Jaision P. Thomas

## Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_\_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 17-41 is/are pending in the application.
- 4a) Of the above claim(s) 1-3, 6-10, 13, 14, 17, 18, 25-28 and 31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4, 5, 11, 12, 19-24, 29, 30 and 32-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/5/2009 has been entered.
2. Claims 1-14 and 17-41 are pending. Claims 39-41 are new. Claims 15 and 16 are cancelled. Claims 1-3, 6-10, 13, 14, 17, 18, 25-28 and 31 are withdrawn. Claims 4, 5, 11, 12, 19, 29, 30 and 32-34 are amended.
3. Claims 4, 5, 11, 12, 19-24, 29, 30 and 32-38 stand rejected under 35 USC 102(b) as being anticipated by or, in the alternative, under 35 USC 103(a) as being obvious over Madden et al. (US Patent 6249076) as detailed in Non-Final Rejection mailed 9/18/2009 and the Final Rejection mailed 6/4/2009.

***Claim Objections***

4. Claim 11 is objected to because of the following informalities: in line 2, after "solid electrolyte layers"

Applicants are suggested to include the word --for--.

Appropriate correction is required.

5. Claim 12 objected to because of the following informalities: the limitation of "said anions being present in an amount from 0.1 % to 30% by weight said electrolyte" appearing in all other independent claims is missing from said claim.

The Examiner notes the omission of limitation detailed above and assumes said omission was inadvertent based on the review of Applicant's remarks which seem to assume newly added limitations are present in all independent claims. If such omission was intentional, the objection will be withdrawn.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 4,5,11,12,19,29,30 and 32-34 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a

way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The newly added limitation of "wherein said plural of fluorine atom is four or less" has not been adequately described in the Specification. The Specification mentions one working example/species limited to tetrafluoroborate anion, however, mentions no additional species which would support a limitation drawn to the genus of fluorine containing anions containing 4 or less fluorine atoms which bond to a central atom as required by the newly added limitation.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 4,5,11,12,19,32-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to Claims 11,12,32 and 33, the Examiner is unclear as to whether the "electrolyte" referred in the phrase "... said electrolyte includes anions which include ..." refers to the "solid electrolyte layer" or the electrolyte included the conductive polymer. The Applicants are requested to add phrases

to clarify consistent with the Specification e.g. --wherein the solid electrolyte layer and electrolyte present in the polymer are different.--

With respect to Claim 34, the Examiner is unclear as to whether the "electrolyte" referred in the phrase "... said electrolyte includes anions which include ..." refers to the electrolyte referenced in line 2 of the claim or the electrolyte included in the conductive polymer. The Applicants are requested to rephrase to clarify consistent with the Specification.

With respect to Claims 4,5,11,12 and 19, the Examiner is unclear on the meaning of the phrase "... is a polymerization method using electrolyte including organic compounds as solvents;". Specifically, it is unclear whether "organic compounds" modifies "electrolyte" or "solvents" or both. The Applicants are suggested to rephrase e.g. --is polymerization method using electrolyte comprising organic compounds wherein the electrolyte can also serve as a solvent--.

### ***Response to Arguments***

10. Applicant's arguments filed 10/5/2009 have been fully considered but they are not persuasive.

Applicants contend that the newly added limitations drawn to the types and amount of counter ion present in the conductive polymer are not taught by the Madden et al. reference and further states the actuators of Madden would not use the same mechanism of deformation as required by the instant claims.

The Examiner respectfully disagrees and notes that Madden et al. incorporated by reference a journal article to Yamaura et al. on Col. 3, lines 43-46 which is attached to the current Office Action teaching the production of polypyrrole polymer via an electrochemical oxidation polymerization process using various counterions such as tetrafluoroborate or aliphatic/aromatic sulfonates (see Abstract of Yamaura et al., "Enhancement of electrical conductivity of polypyrrole film by stretching: Counter ion effect" Synthetic Metals, Vol. 26 (3), pp. 209-224 (1988)). With respect to the weight of electrolyte present in the polymer, the Examiner respectfully submits said levels of electrolyte would be an inherent feature or reasonably expected by one of ordinary skill in the art to be present in the polypyrrole film, especially in view of the broad ranges of electrolyte claimed, absent a showing in the Specification illustrating the criticality of the claimed range with respect to the performance of the said polymer, and the similarity of the methods used to produce the prior art and instantly claimed

conductive polymer. With respect to arguments dealing with the reduction/oxidation mechanism, the Examiner refers Applicants to remarks in the Final Rejection.

***Claim Rejections - 35 USC § 102***

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. Claims 40 and 41 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Madden et al. (US Patent 6249076).

The Examiner refers Applicants to the teachings of Madden et al. summarized in the Non-Final Rejection dated 9/18/2009 as well as Yamaura et al. reference incorporated therein whose teachings are summarized in the "Response to Arguments" section above. The Examiner concludes that said limitations of Claims 40 and 41 would be inherently possessed by the prior art cited.

Alternatively, in the event any modifications of the prior art are necessary to achieve the claimed limitations, the Examiner concludes such properties are within the purview of the skilled artisan.

15. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Madden et al. (US Patent 62490760).

Madden et al. (incorporating Yamaura et al. by reference) is relied upon as disclosed above. However, Madden et al. does not teach the combination of electrolytes of Claim 4 with the sulfonic acid salts having less than 4 carbon atoms.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a combination of the electrolytes as required by Claim 39 since It is *prima facie*

obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose, see *In re Kerkhoven*, 626 F.2d 846,850,205 USPQ 1069, 1072 (CCPA 1980).

### ***Conclusion***

16. The additional prior art cited in the record not specifically referred above is considered cumulative to the record.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jaison P. Thomas whose telephone number is (571) 272-8917. The examiner can normally be reached on Mon-Fri 9:30 am to 6:00 pm.

18. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. P. T./  
Examiner, Art Unit 1796

/Mark Kopec/  
Primary Examiner, Art Unit  
1796